

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application.

Listing of Claims:

Claim 1 (currently amended): An electronic commercial transaction supporting method, comprising:

specifying correspondence relations between attributes determined by respective viewpoints of a plurality of subjects involved in an electronic commercial transaction based on an equivalence relation which satisfies a reflexive law, a symmetric law and a transitive law, to generate ~~generating~~ a computerized Cellular Information Model (CIM), wherein correspondence relations among attributes evolve through growth and self-correction and wherein at least one cellular operation is defined for manipulating attributes and correspondence relations among attributes;

~~extracting by a cellular operation and recording one or more of the specified correspondence relations as a common subspace satisfying a necessary condition for concluding the electronic commercial transaction by employing a cellular decomposition operation by which a set of attributes is decomposed into nonempty disjoint equivalence classes according to the equivalence relation between attributes determined by respective viewpoints of a plurality of subjects involved in an electronic commercial transaction; and~~

reading out and presenting the recorded correspondence relations at a stage of the electronic commercial transaction.

Claim 2 (currently amended): An electronic commercial transaction supporting method, comprising:

specifying correspondence relations between attributes determined by respective viewpoints of a plurality of subjects involved in an electronic commercial transaction, based on an equivalence relation which satisfies a reflexive law, a symmetric law and a transitive law, by using a predetermined equivalence relation as a clue, to generate a computerized Cellular Information Model (CIM), wherein correspondence relations among attributes evolve through growth and self-correction and wherein at least one cellular operation is defined for manipulating attributes and correspondence relations among attributes;

extracting one or more of the specified correspondence relations as a common subspace satisfying a necessary condition for concluding the electronic commercial transaction by employing a cellular decomposition operation, by which a set of attributes is decomposed into nonempty disjoint equivalence classes according to the equivalence relation, so as to be recorded in a data table;

accumulating correspondence relations in the data table, based on actual examples of the electronic commercial transaction; and

reading out and presenting the accumulated correspondence relations at a stage of another electronic commercial transaction, by referring to the data table.

Claim 3 (currently amended): An electronic commercial transaction supporting method, comprising:

~~extracting, based on a predetermined equivalence relation,~~ specifying an attribute that is an object of interest common to a plurality of subjects involved in an electronic commercial transaction, based on an equivalence relation which satisfies a reflexive law, a symmetric law and a transitive law, ~~by a method of cellular decomposition in~~ to generate a computerized Cellular Information Model (CIM), wherein correspondence relations among attributes evolve through growth and self-correction

and wherein at least one cellular operation is defined for manipulating attributes and correspondence relations among attributes;

extracting the specified attribute as a common subspace satisfying a necessary condition for concluding the electronic commercial transaction by employing a cellular decomposition operation, by which a set of attributes is decomposed into nonempty disjoint equivalence classes according to the equivalence relation; and

adding the extracted attribute to a cellular space corresponding to the respective subjects, by a cell attaching method operation by which the common subspace is attached to the cellular space corresponding to the respective subjects.

Claim 4 (currently amended): An electronic commercial transaction supporting method, comprising:

extracting specifying a correspondence relation between attributes that are objects of interest for a plurality of subjects involved in an electronic commercial transaction based on an equivalence relation which satisfies a reflexive law, a symmetric law and a transitive law, to generate a computerized Cellular Information Model (CIM), wherein correspondence relations among attributes evolve through growth and self-correction and wherein at least one cellular operation is defined for manipulating attributes and correspondence relations among attributes;

extracting the specified correspondence relation as a common subspace satisfying a necessary condition for concluding the electronic commercial transaction from an actual stage of the electronic commercial transaction by employing a cellular decomposition operation by which a set of attributes is decomposed into nonempty disjoint equivalence classes according to the equivalence relation, and storing the extracted correspondence relation; and

presenting the stored correspondence relation at an actual stage of another electronic commercial transaction.

Claim 5 (original): A method according to Claim 4, wherein said storing and said presenting are repeated cyclically in such a way as to effect mutual feedback.

Claim 6 (currently amended): An electronic commercial transaction supporting system, comprising:

a shop which is connected to a network and presents merchandise to customers via the network; and

a business information management system connected to the network,

wherein said shop includes:

a correspondence generating unit which specifies a table which records correspondence relations between attributes that are objects of interest for a plurality of respective subjects in an electronic commercial transaction at an actual stage of the transaction, based on an equivalence relation which satisfies a reflexive law, a symmetric law and a transitive law, the correspondence generating unit extracting one or more of the specified correspondence relations as a common subspace satisfying a necessary condition for concluding the electronic commercial transaction by decomposing a set of attributes into nonempty disjoint equivalence classes according to the equivalence relation;

a table which records the extracted correspondence relations; and

wherein said business information management system includes a functional block which transversely refers to said respective tables that a plurality of said shops have.

Claim 7 (original): A system according to Claim 6, wherein said business information management system further includes a second functional block which detects desired one from the correspondence relations recorded in the table of any of said shops.

Claim 8 (original): A system according to Claim 7, wherein said business information management system further includes a third functional block which presents the detected desired correspondence relation to an actual stage of an electronic commercial transaction at another shop.

Claim 9 (original): A system according to Claim 6, wherein in said shop there is provided a local business information management block which manages the table.

Claim 10 (original): A system according to Claim 7, wherein in said shop there is provided a local business information management block which manages the table.

Claim 11 (original): A system according to Claim 8, wherein in said shop there is provided a local business information management block which manages the table.

Claim 12 (original): A system according to Claim 9, wherein said local information management block includes a maintaining functional block which inspects accumulating correspondence relations and suitably modifies the correspondence relations.

Claim 13 (original): A system according to Claim 10, wherein said local information management block includes a maintaining functional block which inspects accumulating correspondence relations and suitably modifies the correspondence relations.

Claim 14 (original): A system according to Claim 11, wherein said local information management block includes a maintaining functional block which inspects accumulating correspondence relations and suitably modifies the correspondence relations.

Claim 15 (original): A system according to Claim 12, wherein said maintaining functional block detects mutually-contradicting ones among the accumulated correspondence relations and keeps one side thereof that is more appropriate-like while other side thereof is deleted from the table.

Claim 16 (original): A system according to Claim 13, wherein said maintaining functional block detects mutually-contradicting ones among the accumulated correspondence relations and keeps one side thereof that is more appropriate-like while other side thereof is deleted from the table.

Claim 17 (original): A system according to Claim 14, wherein said maintaining functional block detects mutually-contradicting ones among the accumulated correspondence relations and keeps one side thereof that is more appropriate-like while other side thereof is deleted from the table.

Claim 18 (currently amended): A business information management system based on a computerized Cellular Information Model (CIM), wherein correspondence relations among attributes continuously evolve through growth and self-correction, comprising:

a first functional block which generalizes a join operation in a relational model, by a form of identification based on an equivalence class, and which fixes and records correspondence relations between attributes that are objects of interest for a plurality of subjects involved in a business, by the identification in a local circumstance where the business is carried out, the identification specifying the correspondence relations, based on an equivalence relation which satisfies a reflexive law, a symmetric law and a transitive law, and extracting one or more of the specified correspondence relations as a common subspace satisfying a necessary condition for carrying out the business by decomposing a set of attributes into nonempty disjoint equivalence classes according to the equivalence relation;

a second functional block which reads out desired one from the recorded correspondence relations and reuses the desired one at a stage of another business; and

a third functional block which maintains or updates the recorded correspondence relations based on a result of the business,

wherein a correspondence relation between attributes formed in a local place is added to a global place by said functional blocks, under a modeling guideline which does not assume the

existence of a management person who grasps in a unified manner all the attributes or interdependence relations of data.

Claim 19 (original): A business information management system according to Claim 18, wherein the form of identification in said first functional block includes a common subspace in which cells corresponding to the respective attributes interest to one another, the common subspace being extracted by a cellular decomposition operation.

Claim 20 (original): A business information management system according to Claim 19, wherein, in said second functional block, a cell corresponding to the common subspace is attached to the cells corresponding to the respective attributes, by a cell attaching operation.